

Ethiopia Rural PCO System F/S Result
Table 5.2.1.2 Merawi North PCO Base Station

(1) Site Information

<i>Category</i>	<i>Survey Item</i>	<i>Survey Result</i>	<i>Remarks</i>
1. Location	Site Name	Merawi North PCO Base Station	Existing Rep. Station to be expanded Possible site)
	Latitude	11° 26' 57" N	
	Longitude	37° 11' 25" E	
	Altitude	2,146 m	
	Site condition	See Attachment –8.	
2. Building	Building Structure	Existing one-story building (rain leaking)	ETC: Repair required (See Fig 3.1.2-5) (Photo) 40 m (See Fig 3.1.2-6) Equipment layout
	Air conditioning	None	
	Installation	Antenna: Existing tower available M/W equipment: Equipment room	
3. Tower	Antenna tower	Existing (H=62m)	Available
4. Power	Commercial Power	(Not available)	Surplus capacity to be verified. Available
	Power for indoor equipment	Existing solar power system	
	DC power	DC – 24V power supply	
	Engine generation	None	
5. Grounding	Indoor Grounding	Within 20m from earth terminal	
	Outdoor Grounding	For microwave tower (existing)	
6. Equipment Installation	Vehicle Access Road	OK (1km mountain road)	Exposed to the weather
	Material Temporary Storage	Approx. 100m ² available	
	Vehicle Carrying in/Parking	OK (up to 5 vehicles)	
	Minimum Entrance space	1.7m(H)/1.0m(W)	
7. Others	Population of Site	184,642 (12,838: Central city)	

(2) Transmission Facilities

<i>Category</i>	<i>Survey Item</i>	<i>Survey Result</i>	<i>Remarks</i>
1. System	BCO Base Station system	1) Adjacent M/W station: Bahir Dar 2) No. of PCO Stations: 13 3) No. of PCO Rep. Stations :1	
1.1 M/W Link	1) Bahir Dar (PC) Station	M/W transmission link (Under construction)	
1.2 Circuit (Subject for F/S)	Required digital circuit (2xE1) To Bahir Dar Station	Link: Bahir Dar – Merawi North PCO BASE (PDH 8x2M is currently under construction)	
2. Antenna (Subject for F/S)	1) For direction to Bahir Dar MW station 2) For direction to PCO stations	40m (Constructed under the on-going project) 40m (Omni-directional antenna) (New installation)	Omni-ANT to be newly installed
3. Antenna tower (Subject for F/S)	Ant. height required 1) For PCO Rep. 2) For direction to PCO stations	(Self-supporting type: 40m (Existing)) Mounting position: H= 20m Mounting position: H= 40m	



Merawi PCO Base Station (Planned Construction site)

Table 5.2.1.2-1 Survey Result for Merawi PCO Subscriber Station
(No.1/Meshenti No.1)

(1) Site Information

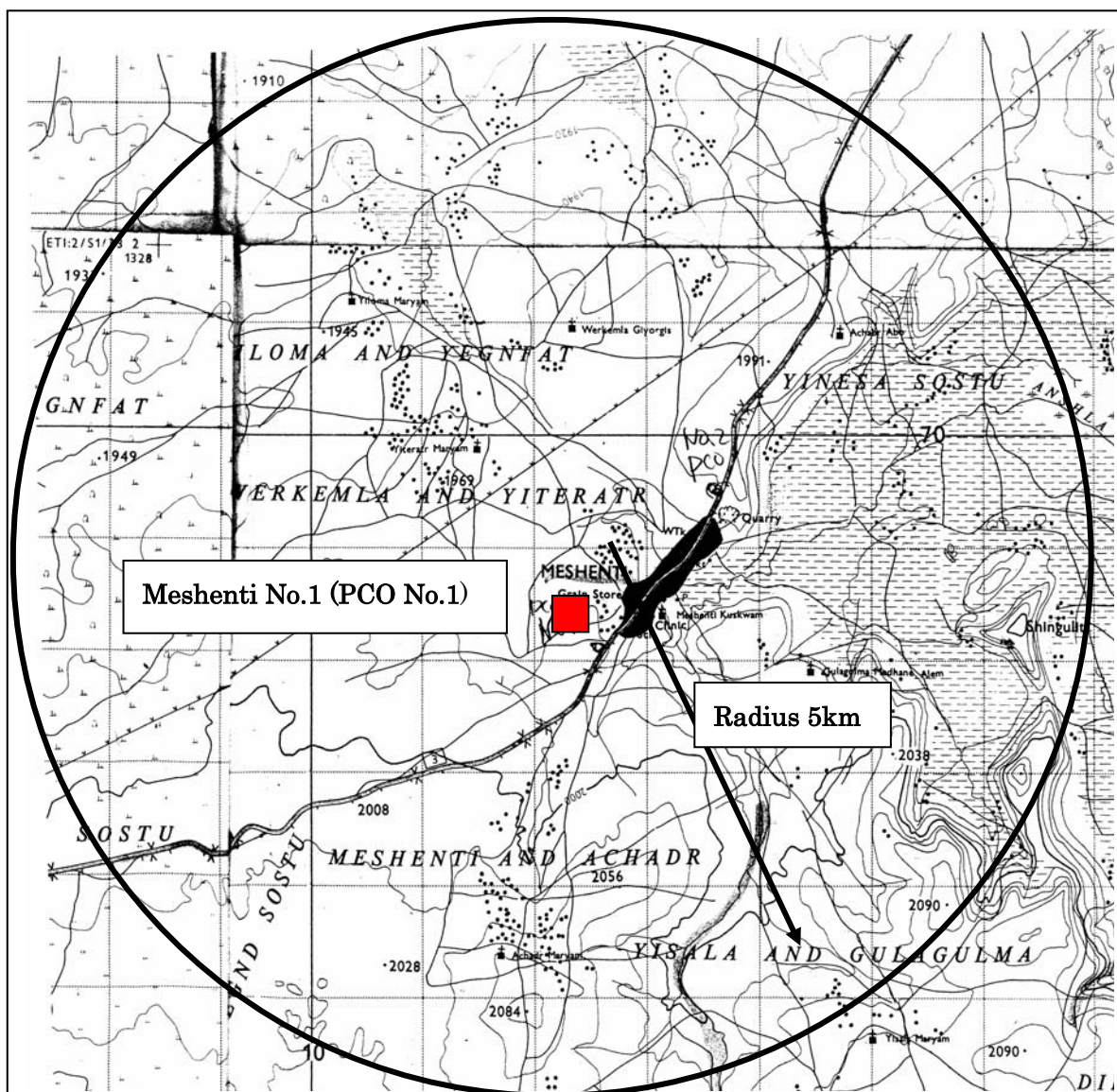
<i>Category</i>	<i>Survey Item</i>	<i>Survey Result</i>	<i>Remarks</i>
1. Location	Site Name	Messhenti No.1 (near Clinic)	Map Survey Data
	Address		
	Latitude	11° 28' 04" N	
	Longitude	37° 16' 57" E	
	Above Sea Level	1,980 m	
	Site condition	Attachment 5.2.1.2-No.1	
2. Building	Building Structure	None	Required
3. Power	Commercial Power	None	Solar power system required
4. Grounding	Indoor Grounding	None	Required
	Outdoor Grounding	None	Required
5. Equipment Installation	Vehicle Access Road	OK (near the road)	Use empty space
	Material Temporary Storage	Approx. 10m × 10m available	
	Vehicle Carrying in/Parking	OK	
	Minimum Entrance	Carry-in road: Approx. 5m	
	Security Guard	Required	
6. Others	Population of Site (Within 2km radius)	About 500 households	
	Temperature/Humidity/Precipitation Data		

(2) PCO Subscriber Station

<i>Category</i>	<i>Survey Item</i>	<i>Survey Result</i>	<i>Remarks</i>
1. System	No. of Subscriber Lines	8 lines (VoIP compatible telephones)	
2. Antenna	Antenna Facility		
	PCO Antenna Height	10m	
	PCO Antenna Direction	Azimuth: 305.1° (in the direction of base station)	
3. Tower	Presence of Towers	None	To be newly installed
	Tower Height	Pole: 10m (new installation)	To be newly installed
	Installation Location	There are installation spaces on the ground.	
4. Equipment	Space for Equipment	None	Required shelter

(3) Subscribers (Demand Area)

Category	Survey Item	Survey Result	Remarks
1. Demand Area	Summary of Topography	1,980 m	Verified by 1/50,000 map and visual check
	- Above Sea Level	Flat land (basin)	
	- Land Feature		
	- House	One story houses	
	- Tree	No trees standing in the direction of base station	
	Expected Demand Area	Attachment -1	



Attachment- 1 Expected Demand Area (Reference)



Attachment 5.2.1.2 - No.1

Table 5.2.1.2-2 Survey Result for Merawi PCO Subscriber Station
(No.2/Meshenti No.2)

(1) Site Information

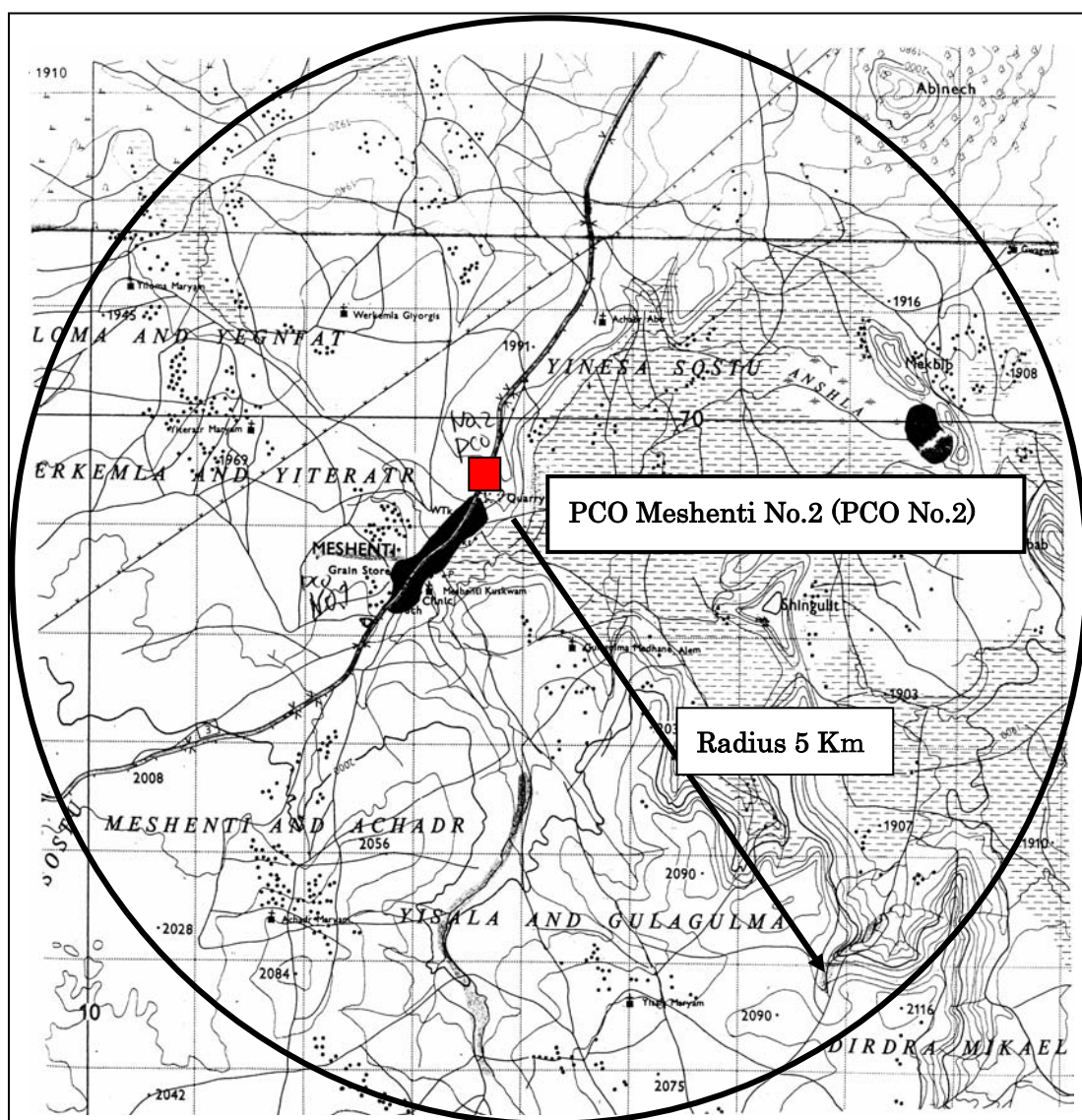
<i>Category</i>	<i>Survey Item</i>	<i>Survey Result</i>	<i>Remarks</i>
1. Location	Site Name	Messhenti No.2 (near the market)	Map Survey Data
	Address		
	Latitude	11° 28' 48" N	
	Longitude	37° 17' 30" E	
	Above Sea Level	1,980 m	
	Site condition	Attachment 5.2.1.2-No.2	
2. Building	Building Structure	None	Required
3. Power	Commercial Power	None	Solar power system required
4. Grounding	Indoor Grounding	None	Required
	Outdoor Grounding	None	Required
5. Equipment Installation	Vehicle Access Road	OK (near the road)	Use empty space
	Material Temporary Storage	Approx. 10m × 10m available	
	Vehicle Carrying in/Parking	OK	Request for placing
	Minimum Entrance Security Guard	Carry-in road: Approx. 5m Required	
6. Others	Population of Site (Within 2km radius)	About 500 households	
	Temperature/Humidity/Precipitation Data		

(2) PCO Subscriber Station

<i>Category</i>	<i>Survey Item</i>	<i>Survey Result</i>	<i>Remarks</i>
1. System	No. of Subscriber Lines	8 lines (VoIP compatible telephones)	
2. Antenna	Antenna Facility		
	PCO Antenna Height	10m	
	PCO Antenna Direction	Azimuth: 252.9° (in the direction of base station)	
3. Tower	Presence of Towers	None	To be newly installed
	Tower Height	Pole: 10m (new installation)	To be newly installed
	Installation Location	There are installation spaces on the ground.	
4. Equipment	Space for Equipment	None	Required shelter

(3) Subscribers (Demand Area)

Category	Survey Item	Survey Result	Remarks
1. Demand Area	Summary of Topography - Above Sea Level - Land Feature - House - Tree Expected Demand Area	1,980 m Flat land (basin) One story houses No trees in the direction of base station Attachment -2	Verified by 1/50,000 map and visual check



Attachment-2 Expected Demand Area (Reference)



Attachment 5.2.1.2 - No.2